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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/508,710	07/10/2000	DAVID J. COLE	33083-PCTUS	7491

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EXAMINER

KRUSE, DAVID H

ART UNIT PAPER NUMBER

1638

DATE MAILED: 12/04/2001

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/508,710

Applicant(s)

COLE ET AL.

Examiner

David H Kruse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-23, 25-27, 29-32, 34-44, 64 and 65 is/are pending in the application.
- 4a) Of the above claim(s) 5, 7, 16-19, 34-42, 44, 64 and 65 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1-4, 8-15, 20-23, 25-27, 29-32 and 43 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6</u> . | 6) <input type="checkbox"/> Other: _____. |

Status of the Application

1. The Draftsman has approved the drawings as originally filed.

DETAILED ACTION

Election/Restrictions

2. Applicant's election with traverse of Group I, Claims 1-4, 8-15, 20-23, 25-27, 29-32 and 43 with SEQ ID NOS.: 1 and 2 in Paper No. 11, filed 24 September 2001 is acknowledged. The traversal is on the ground(s) that the subject matter of the claims is related and thus would not require an undue search burden. This is not found persuasive because nucleotide sequences encoding different proteins are structurally distinct chemical compounds and are unrelated to one another (see item 3 of the Election/Restriction mailed 22 May 2001). In addition, the first invention broadly claims a polynucleotide comprising a coding sequence "capable of hybridizing selectively" to a polynucleotide having the coding sequence of SEQ ID NO: 1, and such polynucleotides were known in the art prior to Applicant's invention, the claims lack the same or corresponding special technical feature as required under PCT Rule 13.2.

The requirement is still deemed proper and is therefore made FINAL.

3. This application contains claims 5, 7, 16-19, 34-42, 44, 64 and 65, which are drawn to an invention nonelected with traverse in Paper No. 11. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR § 1.144) See MPEP § 821.01.
4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR § 1.48(b) if

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one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR § 1.48(b) and by the fee required under 37 CFR § 1.17(i).

Specification

5. This application does not contain an abstract of the disclosure as required by 37 CFR § 1.72(b). An abstract on a separate sheet is required.
6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

7. Claims 1, 3 and 4 are objected to because of the following informalities: The claims recite non-elected sequences, to which the elected invention is not directed. Applicant must amend to claims to delete non-elected inventions/sequences. Appropriate correction is required.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. § 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 1-4 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Applicant has claimed "A polynucleotide" which reads on a product of nature. To obviate this rejection, the claims should be amended to read on an isolated or recombinant polynucleotide.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

11. Claims 1-4, 8-15, 20-23, 25, 29-32 and 43 rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

At claim 1, line 2-3, the phrase "capable of hybridizing selectively" is indefinite because it is unclear if hybridization actually occurs and how selectively is defined. Applicant only provides generalized guidance as to hybridization conditions on page 18, lines 14-18 of the specification.

At claim 4 line 3, the phrase "or a fragment thereof" is indefinite because it is unclear what the metes and bounds of this limitation are.

At claim 8 line 1, the phrase "a polynucleotide according to claim 1" is indefinite because is unclear to which polynucleotide the claim is directed. The phrase should read -- the polynucleotide --.

Claim 9 is indefinite for being dependent upon a non-elected invention and because the phrase "A chimeric gene" lacks a proper antecedent basis in claim 7.

At claim 10 line 1, the phrase "a polynucleotide" should read -- the polynucleotide -- is referring to claims 1-4, and at line 2, the phrase "a chimeric gene" should read -- the chimeric gene -- in referring to claims 8 or 9. Appropriate correction is required.

Claims 11 and 12 are indefinite because the phrase "A(a) vector" should read -- The(the) vector -- in referring to claim 10.

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Claim 13 is indefinite because the phrase "A cell" should read -- the cell -- in referring to claim 12.

Claim 14 is indefinite because the phrase "a chimeric gene" should read -- the chimeric gene -- in referring to claim 8.

Claim 15 is indefinite because the phrase "A cell" should read -- the cell -- in referring to claim 14.

At claims 20, line 2, the phrase "an expression vector" should read -- the expression vector -- in referring to claim 11.

At claim 21, line 2, the phrase "a vector" should read -- the vector -- in referring to claim 11.

At claim 22, line 2, the phrase "plant obtainable" is indefinite because it is unclear if a transgenic plant is actually produced in claim 21. It is suggested that the phrase be amended to read -- plant produced --.

At claim 23 line 3, the phrase "plant obtainable by a method" is indefinite and should read -- plant produced by the method --, in referring to the transgenic plant of claim 21.

Claim 25 is indefinite because the method of claim 20 does not produce a transgenic first-generation plant, plant seed or progeny plant, in the absence of method steps not found therein, the phrase "obtainable by a method" is overly broad and should read -- produced by the method -- in referring to the method of claim 20.

At claim 29 line 2, the phrase "a polynucleotide" is indefinite and should read -- the polynucleotide -- in referring to claim 1.

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At claim 30 line 1, the phrase "A nucleic acid construct" is indefinite and should read -- The nucleic acid construct -- in referring to the construct of claim 29.

At claim 31, the phrase "a construct" is indefinite and should read -- the construct --in referring to claim 29.

At claim 32(a), the limitation "whose herbicidal activity...comprising two GTS subunits" is unclear because at 32(b), the vector according to claim 29 only comprises a coding region for one GTS subunit, said vector only having a site into which a further polynucleotide comprising a coding sequence can be inserted, not has been inserted. Hence, the claim is indefinite because it is unclear what the metes and bounds of the claim are.

At claim 32, line 6, the phrase "a vector" is indefinite and should read -- the vector -- in referring to claim 29.

Claim 47 is indefinite for being dependent upon a non-elected invention. In addition, it is unclear to which transgenic plant the claimed method is directed, hence the metes and bounds of the claim are unclear. See *In re Steele*, 305 F.2d 859, 134 USPQ 292 (CCPA 1962). There the court pointed out that, before the claimed subject matter could properly be compared to the prior art, it was essential to know **what the claims did in fact cover**.

12. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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13. Claims 1 and 2 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant claims an (isolated) polynucleotide encoding a glutathione transferase subunit comprising a coding sequence capable of hybridizing selectively to the coding sequence of SEQ ID NO: 1.

Applicant describes SEQ ID NO: 1, encoding a glutathione transferase subunit, isolated from wheat.

Applicant does not describe the genus of polynucleotides that encode a glutathione transferase subunit. In addition, the phrase "capable of hybridizing selectively" is indefinite as stated above, thus it is unclear how broad of a genus Applicant is claiming.

Hence, it is unclear from the instant specification that Applicant was in possession of the invention as broadly claimed.

See *University of California V. Eli Lilly and Co.*, 43 USPQ2d 1398 (Fed. Cir. 1997), which teaches that the disclosure of a process for obtaining cDNA from a particular organism and the description of the encoded protein fail to provide an adequate written description of the actual cDNA from that organism which would encode the protein from that organism, despite the disclosure of a cDNA encoding that protein from another organism.

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See *Fiers* 25 USPQ 2d (CAFC 1993) at 1606 that states "[a]n adequate written description of a DNA requires more than a mere statement that it is part of the invention and reference to a potential method of isolating it; what is required is a description of the DNA itself".

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. § 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. § 122(b). Therefore, this application is examined under 35 U.S.C. § 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. § 102(e)).

15. Claims 1, 2 and 4 are rejected under 35 U.S.C. § 102(a) as being anticipated by Riechers *et al.* 1997 (Plant Physiology 114:1461-1470).

Riechers discloses an isolated polynucleotide encoding a glutathione transferase subunit, isolated from wheat, which is capable of hybridizing selectively to the coding sequence of SEQ ID NO: 1, which is a DNA molecule. In addition, Riechers discloses a fragment of SEQ ID NO: 1 (see page 1469, left column, second paragraph). Hence, Riechers has previously disclosed all of the claim limitations.

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16. Claims 1, 2, 4, 8-15, 20-23, 25-27, 29-33 and 43 are rejected under 35 U.S.C. § 102(e) as being anticipated by McGonigle *et al* (U.S. Patent 5,962,229).

McGonigle discloses an isolated polynucleotide that is capable of hybridizing selectively to the coding sequence of SEQ ID NO: 1, in addition to a 23 base pair fragment thereof as defined by Applicant on page 16, paragraph 2. McGonigle discloses a chimeric gene, vector and transformed prokaryotic and plant cells comprising said isolated polynucleotide (see Examples 4 and 5 at columns 21 and 22). McGonigle inherently discloses transformed plants, progeny thereof, seed thereof, and callus thereof, in addition to methods of making same (see Example 4 at column 21). McGonigle also discloses a method of controlling the growth of weeds at a locus comprising said transformed plants (see the Abstract on the face page). Hence, McGonigle has previously disclosed all of the claim limitations.

Conclusion


17. No claims are allowed.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David H. Kruse, Ph.D. whose telephone number is (703) 306-4539. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, Dr. Amy Nelson can be reached at (703) 306-3218. The fax telephone number for this Group is (703) 308-4242 or (703) 305-3014.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the William Phillips whose telephone number is (703) 305-3482.

David H. Kruse, Ph.D.
30 November 2001


GARY BENZION
PRIMARY EXAMINER